

**USGS Water-Year Summary**

[**11276500**](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=11276500) **TUOLUMNE R**

**NR HETCH HETCHY CA**

**LOCATION** - Lat 37°56'15", long 119°47'50" referenced to North American Datum of 1927, in SW 1/4 SE 1/4 sec.17, T.1 N., R.20 E., Tuolumne County, CA, Hydrologic Unit 18040009, in Yosemite National Park, on left bank 0.9 mi downstream from O'Shaughnessy Dam at Hetch Hetchy, 2.5 mi downstream from Falls Creek, and 5.0 mi northeast of Mather.

**DRAINAGE AREA** - 457 mi².

**SURFACE-WATER RECORDS**

**PERIOD OF RECORD** - October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Hetch Hetchy damsite, near Sequoia" 1910-14 and as "below Hetch Hetchy damsite, near Sequoia" 1915-18.

**GAGE** - Water-stage recorder, crest-stage gage with concrete control since May 5, 1970. Elevation of gage is 3,480 ft above NGVD of 1929, from topographic map. Prior to Jan. 1, 1915, water-stage recorder at site 1 mi upstream, at damsite, at different datum. Jan. 1, 1915, to Sept. 3, 1968, water-stage recorder, at same site and datum. Oct. 1, 1968, to May 4, 1970, nonrecording gage at site 0.5 mi upstream at different datum.

**REMARKS** - Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 0.9 mi upstream beginning in April 1923. Flow diverted upstream from station through tunnel to Robert C. Kirkwood Powerplant and Hetch Hetchy Aqueduct beginning Apr. 26, 1967. See schematic diagram of Tuolumne River Basin available from the California Water Science Center.

**EXTREMES FOR PERIOD OF RECORD** - Maximum discharge, 16,400 ft³/s, Jan. 3, 1997, gage height, 15.08 ft; no flow at times in 1968-70.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **00060, Discharge, cubic feet per second,** | | | | | | | | | | | | | |
| **YEAR** | **Monthly mean in ft3/s   (Calculation Period: 1910-10-01 -> 2016-10-31)** | | | | | | | | | | | |
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| **1910** |  |  |  |  |  |  |  |  |  | 125.0 | 105.0 | 184.9 |
| **1911** | 851.5 | 539.0 | 869.3 | 1,674 | 3,139 | 7,859 | 4,624 | 567.0 | 123.3 | 72.5 | 65.1 | 36.6 |
| **1912** | 99.0 | 130.8 | 259.3 | 542.7 | 2,382 | 3,266 | 749.5 | 145.0 | 55.5 | 35.3 | 165.0 | 60.8 |
| **1913** | 71.1 | 126.8 | 241.3 | 964.7 | 2,774 | 2,184 | 752.8 | 413.0 | 233.0 | 36.8 | 71.9 | 118.5 |
| **1914** | 694.9 | 475.1 | 1,010 | 1,617 | 4,547 | 5,432 | 3,062 | 616.3 | 102.0 | 103.7 | 74.3 | 53.4 |
| **1915** | 111.3 | 363.9 | 654.7 | 1,647 | 2,573 | 5,237 | 1,977 | 220.5 | 72.4 | 24.3 | 19.3 | 107.9 |
| **1916** | 419.2 | 551.0 | 1,078 | 2,255 | 3,605 | 4,919 | 2,003 | 343.5 | 111.2 | 561.3 | 238.7 | 243.5 |
| **1917** | 183.2 | 338.3 | 472.5 | 1,316 | 2,601 | 6,306 | 1,950 | 249.5 | 71.5 | 24.6 | 17.6 | 23.1 |
| **1918** | 27.4 | 122.6 | 649.5 | 1,365 | 2,368 | 4,249 | 426.3 | 80.4 | 137.4 | 464.4 | 218.8 | 197.8 |
| **1919** | 91.8 | 236.0 | 423.1 | 1,641 | 5,336 | 1,605 | 278.7 | 56.5 | 22.0 | 16.8 | 12.0 | 68.2 |
| **1920** | 89.3 | 104.8 | 425.7 | 977.9 | 3,775 | 3,033 | 487.3 | 102.6 | 51.3 | 241.5 | 284.6 | 316.4 |
| **1921** | 377.0 | 521.4 | 865.8 | 1,403 | 3,278 | 4,538 | 995.0 | 114.3 | 30.5 | 16.9 | 12.2 | 74.5 |
| **1922** | 209.7 | 275.3 | 437.4 | 990.1 | 4,748 | 6,592 | 1,820 | 265.0 | 60.1 | 29.7 | 77.2 | 289.1 |
| **1923** | 293.7 | 287.0 | 369.5 | 722.0 | 889.6 | 2,931 | 1,635 | 1,199 | 5.83 | 19.0 | 1.52 | 1.83 |
| **1924** | 2.51 | 34.2 | 310.9 | 1,551 | 1,698 | 480.0 | 1,995 | 27.1 | 35.9 | 13.8 | 94.8 | 173.7 |
| **1925** | 233.5 | 98.7 | 11.2 | 568.6 | 4,641 | 3,873 | 1,247 | 606.8 | 648.2 | 686.2 | 613.9 | 600.4 |
| **1926** | 576.3 | 557.9 | 612.2 | 595.9 | 2,109 | 1,104 | 599.0 | 620.2 | 581.1 | 697.3 | 644.1 | 593.6 |
| **1927** | 565.8 | 505.0 | 681.0 | 757.3 | 1,369 | 5,354 | 1,582 | 621.6 | 612.9 | 636.4 | 656.7 | 728.1 |
| **1928** | 732.1 | 736.7 | 613.4 | 703.3 | 2,309 | 1,696 | 656.8 | 728.5 | 750.5 | 640.8 | 585.0 | 478.9 |
| **1929** | 115.5 | 124.9 | 390.6 | 559.2 | 615.0 | 1,805 | 749.0 | 628.9 | 610.7 | 749.8 | 749.0 | 594.4 |
| **1930** | 209.9 | 304.0 | 430.7 | 696.3 | 747.9 | 2,351 | 732.0 | 608.3 | 609.3 | 710.6 | 688.4 | 656.7 |
| **1931** | 299.4 | 184.8 | 314.8 | 603.2 | 693.5 | 946.9 | 783.0 | 818.8 | 101.0 | 53.0 | 53.0 | 56.3 |
| **1932** | 342.0 | 532.5 | 604.5 | 704.0 | 1,110 | 5,465 | 1,781 | 607.9 | 611.7 | 607.3 | 726.0 | 701.5 |
| **1933** | 588.3 | 122.4 | 329.5 | 619.3 | 663.8 | 2,666 | 845.8 | 573.8 | 582.5 | 672.7 | 701.2 | 591.2 |
| **1934** | 505.3 | 443.6 | 523.4 | 531.8 | 531.8 | 524.1 | 634.2 | 735.8 | 693.1 | 652.9 | 475.1 | 506.7 |
| **1935** | 363.0 | 456.7 | 485.5 | 671.1 | 1,847 | 5,242 | 1,132 | 641.5 | 621.8 | 570.8 | 589.7 | 545.5 |
| **1936** | 515.8 | 403.9 | 1,017 | 869.1 | 3,414 | 3,911 | 1,300 | 625.7 | 602.7 | 592.8 | 594.7 | 629.0 |
| **1937** | 567.5 | 547.5 | 603.8 | 507.4 | 4,072 | 3,240 | 636.7 | 580.1 | 541.4 | 551.8 | 597.9 | 641.3 |
| **1938** | 713.4 | 615.6 | 600.0 | 727.1 | 2,195 | 7,218 | 3,241 | 821.2 | 755.0 | 760.4 | 779.9 | 746.2 |
| **1939** | 681.5 | 527.9 | 529.4 | 1,368 | 604.6 | 660.9 | 1,039 | 1,320 | 1,143 | 642.0 | 531.3 | 591.0 |
| **1940** | 490.5 | 453.4 | 471.8 | 585.6 | 1,763 | 3,852 | 785.5 | 641.8 | 951.8 | 763.0 | 696.2 | 625.5 |
| **1941** | 572.8 | 533.1 | 651.2 | 709.9 | 1,873 | 5,532 | 2,514 | 738.3 | 737.0 | 738.9 | 743.3 | 718.7 |
| **1942** | 711.0 | 725.9 | 693.8 | 728.1 | 1,457 | 6,063 | 2,853 | 727.6 | 748.3 | 739.4 | 741.2 | 721.2 |
| **1943** | 720.0 | 712.1 | 723.3 | 796.2 | 3,255 | 3,911 | 1,691 | 747.0 | 748.9 | 756.4 | 764.5 | 757.6 |
| **1944** | 765.0 | 780.6 | 748.1 | 750.6 | 767.7 | 1,084 | 1,180 | 934.7 | 913.7 | 771.2 | 760.8 | 760.0 |
| **1945** | 770.0 | 772.5 | 766.8 | 777.1 | 820.5 | 4,307 | 1,974 | 766.6 | 773.6 | 765.2 | 749.2 | 732.1 |
| **1946** | 722.3 | 576.7 | 580.0 | 811.4 | 3,522 | 2,811 | 862.2 | 1,232 | 1,003 | 758.0 | 726.9 | 697.2 |
| **1947** | 729.0 | 747.2 | 703.3 | 580.3 | 622.8 | 891.2 | 1,710 | 692.5 | 719.0 | 695.5 | 746.0 | 675.4 |
| **1948** | 548.1 | 346.6 | 197.0 | 530.2 | 539.9 | 2,670 | 1,104 | 564.1 | 718.8 | 812.6 | 729.5 | 726.2 |
| **1949** | 727.3 | 729.9 | 712.4 | 731.7 | 768.7 | 1,656 | 716.1 | 700.1 | 741.8 | 747.8 | 747.0 | 748.8 |
| **1950** | 743.2 | 751.5 | 746.5 | 701.9 | 753.6 | 2,924 | 1,110 | 729.5 | 723.7 | 735.1 | 751.3 | 2,281 |
| **1951** | 745.6 | 731.4 | 746.8 | 1,757 | 2,819 | 3,122 | 889.7 | 739.8 | 711.0 | 730.5 | 731.4 | 744.5 |
| **1952** | 729.2 | 684.9 | 1,043 | 2,803 | 3,043 | 3,250 | 2,781 | 806.6 | 752.3 | 750.0 | 749.3 | 747.8 |
| **1953** | 714.0 | 742.3 | 737.5 | 746.4 | 742.7 | 2,185 | 1,919 | 760.2 | 751.6 | 757.0 | 718.9 | 742.9 |
| **1954** | 729.7 | 731.9 | 751.6 | 784.7 | 1,050 | 2,077 | 779.7 | 766.0 | 754.8 | 726.5 | 625.7 | 654.5 |
| **1955** | 686.8 | 686.6 | 697.5 | 593.2 | 584.1 | 738.4 | 1,310 | 742.8 | 731.5 | 728.4 | 727.9 | 721.7 |
| **1956** | 772.4 | 731.2 | 851.5 | 1,826 | 3,425 | 5,121 | 2,643 | 760.1 | 730.1 | 732.5 | 729.0 | 734.7 |
| **1957** | 737.6 | 743.9 | 753.0 | 772.2 | 755.8 | 3,000 | 939.7 | 730.4 | 729.8 | 722.8 | 734.3 | 702.5 |
| **1958** | 642.1 | 683.4 | 697.9 | 1,609 | 3,176 | 3,246 | 1,862 | 747.2 | 727.0 | 737.1 | 754.6 | 725.6 |
| **1959** | 719.3 | 722.4 | 719.0 | 703.2 | 694.8 | 780.4 | 724.6 | 722.0 | 720.7 | 724.1 | 723.0 | 718.4 |
| **1960** | 625.8 | 542.1 | 537.0 | 653.0 | 729.3 | 973.1 | 717.5 | 708.7 | 710.1 | 702.4 | 531.4 | 630.6 |
| **1961** | 713.6 | 639.0 | 486.0 | 521.5 | 493.4 | 977.4 | 950.6 | 736.8 | 279.9 | 351.2 | 279.0 | 274.0 |
| **1962** | 276.1 | 324.0 | 681.0 | 741.3 | 925.9 | 3,268 | 1,235 | 740.3 | 745.1 | 745.7 | 747.6 | 743.5 |
| **1963** | 740.6 | 735.8 | 720.1 | 682.3 | 2,039 | 3,184 | 1,796 | 734.2 | 733.1 | 751.0 | 750.1 | 768.9 |
| **1964** | 755.6 | 751.2 | 748.0 | 744.9 | 725.6 | 731.9 | 730.8 | 743.0 | 749.3 | 744.7 | 732.5 | 744.5 |
| **1965** | 1,221 | 1,556 | 1,050 | 1,860 | 2,418 | 2,315 | 1,744 | 1,047 | 750.2 | 733.8 | 758.1 | 730.8 |
| **1966** | 706.8 | 694.2 | 714.0 | 722.9 | 1,860 | 966.4 | 965.0 | 740.5 | 733.4 | 729.4 | 717.3 | 742.3 |
| **1967** | 756.1 | 756.5 | 298.7 | 598.5 | 440.1 | 4,217 | 3,510 | 159.9 | 90.0 | 105.4 | 81.6 | 112.6 |
| **1968** | 90.0 | 68.1 | 71.4 | 65.1 | 83.2 | 75.1 | 68.2 | 123.8 | 36.1 | 31.1 | 33.6 | 34.7 |
| **1969** | 42.5 | 159.6 | 96.5 | 423.8 | 3,327 | 4,932 | 2,191 | 91.8 | 70.4 | 45.6 | 46.0 | 45.2 |
| **1970** | 51.5 | 35.6 | 43.9 | 266.2 | 1,187 | 2,013 | 384.7 | 113.3 | 31.6 | 33.1 | 33.9 | 36.8 |
| **1971** | 33.9 | 31.7 | 30.7 | 34.8 | 77.2 | 1,404 | 476.9 | 167.8 | 72.0 | 33.5 | 36.4 | 36.4 |
| **1972** | 105.6 | 109.7 | 34.6 | 35.8 | 75.0 | 74.7 | 74.1 | 75.5 | 57.3 | 35.3 | 34.4 | 38.6 |
| **1973** | 38.9 | 36.9 | 35.8 | 124.2 | 581.5 | 2,563 | 148.0 | 73.2 | 57.4 | 36.4 | 37.4 | 39.6 |
| **1974** | 319.4 | 304.8 | 29.9 | 258.3 | 1,468 | 3,297 | 448.1 | 66.7 | 83.5 | 34.2 | 34.9 | 35.3 |
| **1975** | 39.6 | 42.6 | 39.7 | 51.3 | 187.9 | 2,892 | 281.8 | 76.7 | 52.9 | 35.9 | 35.1 | 36.0 |
| **1976** | 35.5 | 34.1 | 35.7 | 80.4 | 79.0 | 79.9 | 78.8 | 78.6 | 58.8 | 36.9 | 35.6 | 35.7 |
| **1977** | 33.5 | 34.3 | 34.2 | 34.8 | 78.9 | 71.2 | 69.6 | 72.4 | 56.0 | 37.2 | 36.3 | 39.6 |
| **1978** | 41.3 | 49.6 | 42.8 | 39.7 | 1,364 | 3,808 | 1,898 | 175.4 | 60.2 | 39.3 | 39.1 | 38.2 |
| **1979** | 43.1 | 42.1 | 42.3 | 36.9 | 1,640 | 1,584 | 100.7 | 76.2 | 57.4 | 36.2 | 35.0 | 35.0 |
| **1980** | 49.3 | 45.3 | 41.9 | 514.6 | 2,695 | 2,498 | 2,721 | 126.5 | 56.9 | 36.8 | 37.3 | 37.3 |
| **1981** | 37.6 | 39.6 | 45.3 | 33.6 | 72.7 | 296.1 | 75.6 | 76.5 | 56.7 | 37.5 | 39.8 | 39.8 |
| **1982** | 44.9 | 45.8 | 97.3 | 846.4 | 3,071 | 4,428 | 2,505 | 177.4 | 99.3 | 50.9 | 67.3 | 555.4 |
| **1983** | 68.5 | 71.8 | 489.0 | 1,329 | 2,076 | 5,885 | 5,149 | 1,263 | 113.0 | 72.6 | 77.9 | 71.9 |
| **1984** | 105.3 | 69.3 | 67.4 | 414.2 | 3,209 | 2,841 | 469.2 | 131.3 | 94.2 | 66.0 | 65.2 | 53.8 |
| **1985** | 51.5 | 59.5 | 61.7 | 78.2 | 103.6 | 114.0 | 109.7 | 109.6 | 68.1 | 51.1 | 51.4 | 43.5 |
| **1986** | 45.7 | 71.7 | 74.5 | 1,371 | 3,318 | 3,798 | 768.6 | 146.1 | 101.1 | 164.0 | 560.7 | 53.2 |
| **1987** | 40.2 | 39.3 | 36.6 | 37.2 | 51.1 | 76.3 | 107.5 | 113.2 | 85.3 | 42.2 | 35.8 | 39.4 |
| **1988** | 59.8 | 65.1 | 53.1 | 40.5 | 84.3 | 125.8 | 113.8 | 87.4 | 86.9 | 33.0 | 37.9 | 38.4 |
| **1989** | 47.6 | 55.0 | 56.9 | 72.3 | 154.7 | 961.9 | 216.1 | 209.9 | 124.9 | 57.2 | 59.6 | 55.8 |
| **1990** | 49.8 | 49.9 | 50.4 | 34.3 | 49.0 | 136.4 | 98.0 | 122.2 | 59.4 | 35.3 | 33.6 | 34.1 |
| **1991** | 36.9 | 35.1 | 38.7 | 66.2 | 79.9 | 108.9 | 139.8 | 144.4 | 111.8 | 58.6 | 51.7 | 41.4 |
| **1992** | 41.2 | 42.6 | 50.5 | 64.2 | 51.7 | 74.5 | 94.0 | 122.1 | 70.6 | 37.4 | 38.0 | 38.6 |
| **1993** | 50.7 | 55.0 | 113.2 | 158.4 | 917.0 | 1,981 | 925.3 | 137.1 | 73.1 | 46.4 | 54.0 | 54.7 |
| **1994** | 39.9 | 34.7 | 34.9 | 36.2 | 50.7 | 76.5 | 76.7 | 75.7 | 63.3 | 37.4 | 37.6 | 37.2 |
| **1995** | 109.4 | 137.2 | 162.9 | 167.7 | 2,741 | 2,593 | 5,055 | 521.8 | 80.9 | 57.7 | 61.1 | 51.3 |
| **1996** | 55.0 | 149.7 | 132.8 | 151.6 | 2,660 | 2,102 | 357.2 | 124.5 | 102.2 | 61.1 | 62.4 | 617.6 |
| **1997** | 2,105 | 127.5 | 129.9 | 149.6 | 2,518 | 1,900 | 149.9 | 135.9 | 88.8 | 59.2 | 60.1 | 48.7 |
| **1998** | 88.2 | 139.1 | 142.8 | 156.5 | 195.4 | 3,794 | 3,200 | 149.5 | 92.8 | 63.2 | 62.6 | 54.7 |
| **1999** | 46.3 | 117.7 | 134.0 | 145.5 | 1,555 | 1,881 | 272.9 | 128.5 | 98.0 | 67.1 | 64.9 | 50.7 |
| **2000** | 37.3 | 68.3 | 138.3 | 157.2 | 864.2 | 1,297 | 140.9 | 126.7 | 100.4 | 65.1 | 66.0 | 57.1 |
| **2001** | 43.0 | 52.4 | 52.1 | 84.1 | 148.0 | 112.9 | 108.5 | 111.5 | 74.1 | 56.0 | 56.0 | 66.9 |
| **2002** | 104.4 | 63.2 | 59.8 | 113.2 | 165.2 | 409.0 | 127.6 | 132.2 | 106.4 | 66.3 | 63.1 | 57.3 |
| **2003** | 56.0 | 60.7 | 48.2 | 103.3 | 775.5 | 2,484 | 134.4 | 131.7 | 93.3 | 68.8 | 67.1 | 55.4 |
| **2004** | 58.3 | 66.1 | 126.1 | 142.1 | 409.7 | 553.4 | 114.3 | 116.2 | 78.8 | 52.8 | 48.2 | 40.3 |
| **2005** | 57.0 | 78.7 | 139.2 | 143.1 | 2,797 | 2,479 | 1,205 | 122.5 | 91.9 | 63.4 | 55.3 | 54.5 |
| **2006** | 68.0 | 80.1 | 129.9 | 684.3 | 3,233 | 4,553 | 1,216 | 112.5 | 78.6 | 57.1 | 63.3 | 54.2 |
| **2007** | 45.9 | 39.0 | 52.0 | 68.3 | 386.1 | 136.4 | 74.5 | 74.4 | 65.9 | 38.4 | 35.7 | 34.1 |
| **2008** | 41.1 | 69.2 | 66.7 | 134.8 | 209.3 | 501.7 | 119.3 | 117.9 | 92.5 | 49.3 | 45.0 | 38.5 |
| **2009** | 50.9 | 59.7 | 82.7 | 134.5 | 3,069 | 1,319 | 193.6 | 130.8 | 106.9 | 65.5 | 63.2 | 52.3 |
| **2010** | 54.4 | 60.3 | 62.7 | 377.4 | 2,299 | 2,311 | 418.7 | 129.8 | 94.5 | 69.7 | 71.1 | 330.1 |
| **2011** | 60.8 | 121.1 | 126.3 | 141.5 | 1,949 | 4,235 | 3,118 | 235.8 | 95.5 | 68.7 | 62.6 | 52.8 |
| **2012** | 40.1 | 57.8 | 44.6 | 90.5 | 902.0 | 208.9 | 113.2 | 114.5 | 74.8 | 53.4 | 53.7 | 45.5 |
| **2013** | 58.5 | 73.1 | 78.1 | 134.7 | 139.5 | 139.0 | 114.1 | 115.6 | 78.7 | 54.7 | 58.5 | 47.3 |
| **2014** | 40.3 | 35.8 | 35.6 | 36.9 | 85.1 | 76.4 | 72.9 | 74.1 | 61.6 | 35.6 | 35.5 | 34.9 |
| **2015** | 40.6 | 35.5 | 35.2 | 35.4 | 51.6 | 75.2 | 75.4 | 76.3 | 63.4 | 36.5 | 37.9 | 43.5 |
| **2016** | 71.2 | 120.6 | 139.4 | 550.8 | 1,835 | 1,049 | 184.9 | 137.7 | 92.8 | 69.1 |  |  |
| **Mean of monthly Discharge** | 333 | 315 | 368 | 617 | 1,580 | 2,460 | 1,110 | 407 | 327 | 311 | 307 | 329 |